CONFIDENTIAL

HAZARD RANKING SYSTEM PRELIMINARY SCORE
FOR
GEORGIA POWER COMPANY, WANSLEY STEAM PLANT
ROOPVILLE, HEARD COUNTY, GEORGIA

This preliminary score was calculated using the draft SI worksheets. All four pathways are evaluated.

The following score reflects a hazardous waste quantity of 10,000. The source areas include the Ash Pond (160 acres), a large construction landfill (5 acres), a retention pond (7 acres), and two coal runoff ponds (2 acres). Analytical data from the 1990 sampling investigation indicated the presence of several metals in these source areas, including barium, chromium, cobalt, manganese, arsenic, phenanthrene, thallium, and selenium. Trichlorotriflouroethane (Freon), delta-BHC, and endosulfan sulfate were also detected.

The groundwater pathway is of primary concern due to the presence of 565 private drinking water wells within 4 miles from the site. The aquifer of concern from which the wells are drawing is the unconfined residual soil/crystalline rock aquifer system. An observed release to groundwater was scored based on sampling data indicating elevated levels of barium, chromium, cobalt, and manganese in onsite groundwater samples. The total number of groundwater users in the area is 1,553.

The surface water pathway is also of concern. An observed release to surface water was scored based on sampling data indicating elevated levels of arsenic from a sediment sample collected from the Chattahoochee River. The Chattahoochee River is used for fishing and other forms of recreation and was scored as a Level II fishery; however, there are no drinking water intakes, sensitive environments, or wetlands along the 15-mile migration pathway.

The soil and air pathways are of little concern, since there are no residences, schools, or day-care centers within 200 feet of the site. There are 325 workers on site, however. There are no sensitive environments within 4 miles of the site. The population of the study area is 3,380.

Based on the threat to the targets along the groundwater and surface water pathways, further action is recommended for Georgia Power, Wansley Steam Plant.

S_{gw} = 32.26
S_{sw} = 100
S_{so} = 6.77
S_a = 8.55

OVERALL SCORE = 52.82

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

GROUND WATER MIGRATION PATHWAY SCORESHEET

FACTOR CATEGORIES AND FACTORS

	Likelihood of Release to an Aquifer	Maximum Value	Value Assigned	
1.	Observed Release	550	550	
2.	Potential to Release			
	2a. Containment	10	-	
	2b. Net Precipitation	10	-	
	2c. Depth to Aquifer	5	-	
	2d. Travel Time	35	-	
	2e. Potential to Release [lines 2a x (2b + 2c + 2d)]	500	0	
3.	Likelihood of Release (higher of lines 1 or 2e)	550		550
	Waste Characteristics			
4.	Toxicity/Mobility	a	10,000	
5.	Hazardous Waste Quantity	a	10,000	
6.	Waste Characteristics	100		100
	Targets			
7.	Nearest Well	50	18	
8.	Population			
	8a. Level I Concentrations	b	0	
	8b. Level II Concentrations	b	0	
	8c. Potential Contamination	b	25.4	
	8d. Population (lines 8a + 8b + 8c)	b	25.4	
9.	Resources	5	5	
10.	Wellhead Protection Area	20	0	
11.	Targets (lines 7 + 8d + 9 + 10)	b		48.4
	Ground Water Migration Score for an Aquifer			
12.	Aquifer Score [(lines 3 x 6 x 11)/82,500]^c	100		32.26
	Ground Water Migration Pathway Score			
13.	Pathway Score (S_{GW}), (highest value from line 12 for all aquifers evaluated) ***	100		32.26

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a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to the nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

	Factor Categories and Factors	Maximum Value	Value Assigned	
DRINKING WATER THREAT				
	Likelihood of Release			
1.	Observed Release	550	550	
2.	Potential Release by Overland Flow			
	2a. Containment	10	-	
	2b. Runoff	25	-	
	2c. Distance to Surface Water	25	-	
	2d. Potential to Release by Overland Flow [lines 2a x (2b + 2c)]	500	-	
3.	Potential to Release by Flood			
	3a. Containment (Flood)	10	-	
	3b. Flood Frequency	50	-	
	3c. Potential to Release by Flood (lines 3a x 3b)	500	-	
4.	Potential to Release (lines 2d + 3c, subject to a maximum of 500)	500	0	
5.	Likelihood to Release (higher of lines 1 and 4)	550		550
	Waste Characteristics			
6.	Toxicity/Persistence	a	10,000	
7.	Hazardous Waste Quantity	a	10,0000	
8.	Waste Characteristics	100		100
	Targets			
9.	Nearest Intake	50	0	
10.	Population			
	10a. Level I Concentrations	b	0	
	10b. Level II Concentrations	b	0	
	10c. Potential Contamination	b	0	
	10d. Population (lines 10a + 10b + 10c)	b	0	
11.	Resources	5	5	
12.	Targets (lines 9 + 10d + 11)	b		5
	Drinking Water Threat Score			
13.	Drinking Water Threat Score ([lines 5 x 8 x 12]/82,500, subject to a maximum of 100)	100		3.3

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

SURFACE WATER, OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET (continued)

	Factor Categories and Factors	Maximum Value	Value Assigned	
HUMAN FOOD CHAIN THREAT				
	Likelihood of Release			
14.	Likelihood of Release (same value as line 5)	550		550
	Waste Characteristics			
15.	Toxicity/Persistence/Bioaccumulation	a	5×10^8	
16.	Hazardous Waste Quantity	a	10,000	
17.	Waste Characteristics	1,000		1,000
	Targets			
18.	Food Chain Individual	50	0	
19.	Population			
	19a. Level I Concentrations	b	50	
	19b. Level II Concentrations	b	0	
	19c. Potential Human Food Chain Contamination	b	0	
	19c. Population (lines 19a + 19b +19c)	b	45	
20.	Targets (lines 18 + 19d)			45
	Human Food Chain Threat Score			
21.	Human Food Chain Threat Score ([lines 14 x 17 x 20]/82,500, subject to a maximum of 100)	100		33.3
ENVIRONMENTAL THREAT				
	Likelihood of Release			
22.	Likelihood of Release (same value as line 5)	550		550
	Waste Characteristics			
23.	Ecosystem Toxicity/Persistence/Bioaccumulation	a	5×10^5	
24.	Hazardous Waste Quantity	a	10,0000	
25.	Waste Characteristics	1,000		180
26.	Sensitive Environments			
	26a. Level I Concentrations	b	0	
	26b. Level II Concentrations	b	0	
	26c. Potential Contamination	b	0	
	26d. Sensitive Environments (lines 26a + 26b + 26c)	b	0	

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

SURFACE WATER, OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET (concluded)

	Factor Categories and Factors	Maximum Value	Value Assigned
	Targets		
27.	Targets (value from line 26d)		0
	Environmental Threat Score		
28.	Environmental Threat Score ([lines 22 x 25 x 27]/82,500, subject to a maximum of 60)	60	0
	SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE FOR A WATERSHED		
29.	Watershed Score[c] (lines 13 + 21 + 28, subject to a maximum of 100)	100	100
	SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE		
30.	Component Score (S_{OF})[c] (Highest score from line 29 for all watersheds evaluated, subject to a maximum of 100)	100	100

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to the nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

SOIL EXPOSURE PATHWAY SCORESHEET

	Factor Categories and Factors	Maximum Value	Value Assigned	
RESIDENT POPULATION THREAT				
	Likelihood of Exposure			
1.	Likelihood of Exposure	550		550
	Waste Characteristics			
2.	Toxicity	a	10,000	
3.	Hazardous Waste Quantity	a	10,000	
4.	Waste Characteristics	100		100
	Targets			
5.	Resident Individual	50	0	
6.	Resident Population			
	6a. Level I Concentrations	b	0	
	6b. Level II Concentrations	b	0	
	6c. Resident Population (lines 6a + 6b)	b	0	
7.	Workers	15	10	
8.	Resources	5	0	
9.	Terrestrial Sensitive Environments	c	0	
10.	Targets (lines 5 + 6c + 7 + 8 + 9)	b		10
	Resident Population Threat Score			
11.	Resident Population Threat (Lines 1 x 4 x 10)/82,500	b		6.67
NEARBY POPULATION THREAT				
	Likelihood of Exposure			
12.	Attractiveness/Accessibility	100	100	
13.	Area of Contamination	100	100	
14.	Likelihood of Exposure	500		500
	Waste Characteristics			
15.	Toxicity	a	10,000	
16.	Hazardous Waste Quantity	a	10,000	
17.	Waste Characteristics	100		100

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to the nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

SOIL EXPOSURE PATHWAY SCORESHEET (concluded)

Factor Categories and Factors		Maximum Value	Value Assigned	
	Targets			
18.	Nearby Individual	1	0	
19.	Population Within 1 Mile	b	0.17	
20.	Targets (lines 18 + 19)	b		0.17
	Nearby Population Threat Score			
21.	Nearby Population Threat (lines 14 x 17 x 20)	b		0.1
SOIL EXPOSURE PATHWAY SCORE			Nearby Population Threat: (Default Value)	2
22.	Soil Exposure Pathway Score[d] (S_s), (lines [11 + 21], subject to a maximum of 100)	100		6.77

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a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c No specific maximum value applies to the factor. However, pathway score based solely on sensitive environments is limited to maximum of 60.

d Do not round to the nearest integer.

Site Name: Georgia Power Company-Wansley Steam Plant

Location: Roopville, Heard County, Georgia

AIR MIGRATION PATHWAY SCORESHEET

Factor Categories and Factors

	Likelihood of Release	Maximum Value	Value Assigned	
1.	Observed Release	550	0	
2.	Potential to Release			
	2a. Gas Potential to Release	500	-	
	2b. Particulate Potential to Release	500	-	
	2c. Potential to Release (higher of lines 2a and 2b)	500	500	
3.	Likelihood of Release (higher of lines 1 and 2c)	a		500
	Waste Characteristics			
4.	Toxicity/Mobility	a	20	
5.	Hazardous Waste Quantity	a	10,000	
6.	Waste Characteristics	100		18
	Targets			
7.	Nearest Individual	50	20	
8.	Population			
	8a. Level I Concentrations	b	0	
	8b. Level II Concentrations	b	0	
	8c. Potential Contamination	b	53.4	
	8d. Population (lines 8a + 8b + 8c)	b	53.4	
9.	Resources	5	5	
10.	Sensitive Environments			
	10a. Actual Contamination	c	0	
	10b. Potential Contamination	c	0	
	10c. Sensitive Environments (lines 10a + 10b)	c	0	
11.	Targets (lines 7 + 8d + 9 + 10c)	b		78.4
	Air Migration Pathway Score			
12.	Pathway Score (S_a) [(Lines 3 x 6 x 11)/82,500][d]	100		8.55

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c No specific maximum value applies to the factor. However, pathway score based solely on sensitive environments is limited to maximum of 60.

d Do not round to the nearest integer.

APPENDIX C

SITE INSPECTION WORKSHEETS

This appendix consists of worksheets that can be used to generate an SI site score. Completion of these worksheets is not required, but the SI investigator must evaluate an SI score, either by these worksheets, *PREscore*, or other Regional scoring tools.

The worksheets consist of instructions and data tables to be filled in with scores from HRS reference tables. The data tables may also call for Data Type and References.

DATA TYPE: The Data Type columns should be filled in with an **H**, **Q**, or **+** if the data are HRS quality and well documented. The Data Type column should be filled in with an **E**, **X**, or **-** if the data represent estimates, approximations, or are not fully documented. This type identifies data gaps for the expanded SI to investigate.

REFERENCES: The Reference columns should be filled in with coded reference numbers. The numbered reference list should be attached or the numbering should be cross-referenced to the SI Narrative Report.

The SI investigator will need the current Superfund Chemical Data Matrix (SCDM) OSWER Directive 9345.1-13 (revised semi-annually) to complete these worksheets.

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SITE INSPECTION WORKSHEETS

CERCLIS IDENTIFICATION NUMBER
GAD000612937

SITE LOCATION			
SITE NAME: LEGAL, COMMON, OR DESCRIPTIVE NAME OF SITE: Georgia Power Company, Wansley Steam Plant			
STREET ADDRESS, ROUTE, OR SPECIFIC LOCATION IDENTIFIER: Friendship Road, West of State Hwy 27			
CITY: Roopville	STATE: GA	ZIP CODE:	TELEPHONE: ( )
COORDINATES: LATITUDE and LONGITUDE: 33°24'48" N/85°01'57" W	TOWNSHIP, RANGE, AND SECTION:		

OWNER/OPERATOR IDENTIFICATION					
OWNER: GA Power Company, Oglethorpe Pwr, Municipal Electric Authority of GA, city of Dalton, GA			OPERATOR: GA Power Co.		
OWNER ADDRESS			OPERATOR ADDRESS		
CITY			CITY: Atlanta		
STATE	ZIP CODE	TELEPHONE: ( )	STATE: GA	ZIP CODE	TELEPHONE: ( )

SITE EVALUATION		
AGENCY/ORGANIZATION: Halliburton NUS Corp.		
INVESTIGATOR: Steve Petrides		
CONTACT: Suzanne Quillian		
ADDRESS: 2075-E W. Park Pl Blvd.		
CITY: Stone Mtn	STATE: Georgia	ZIP CODE: 30087
TELEPHONE: ( ) (404) 413-0965		

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GENERAL INFORMATION

Site Description and Operational History: Provide a brief description of the site and its operational history. State the site name, owner, operator, type of facility and operations, size of property, active or inactive status, and years of waste generation. Summarize waste treatment, storage, or disposal activities that have or may have occurred at the site; note also if these activities are documented or alleged. Identify all source types and prior spills, floods, or fires. Summarize highlights of the PA and other investigations. Cite references.

Plant Wansley has been in operation since 1976 and has 325 employees. The plant is a coal-fired electric generating plant which produces electricity by burning coal to heat boilers to produce steam which turn generator turbines. Wastes generated at the plant is largely fly ash from the combustion of coal and boiler cleaner wastes, both of which are deposited in a large 160 acre Ash Pond on site. In addition to the Ash Pond, other sources include 3 inactive landfills, two coal pile runoff ponds, and a cooling water retention pond. In September, 1990 EPA FIT-III conducted a sampling investigation where 33 environmental samples were collected.

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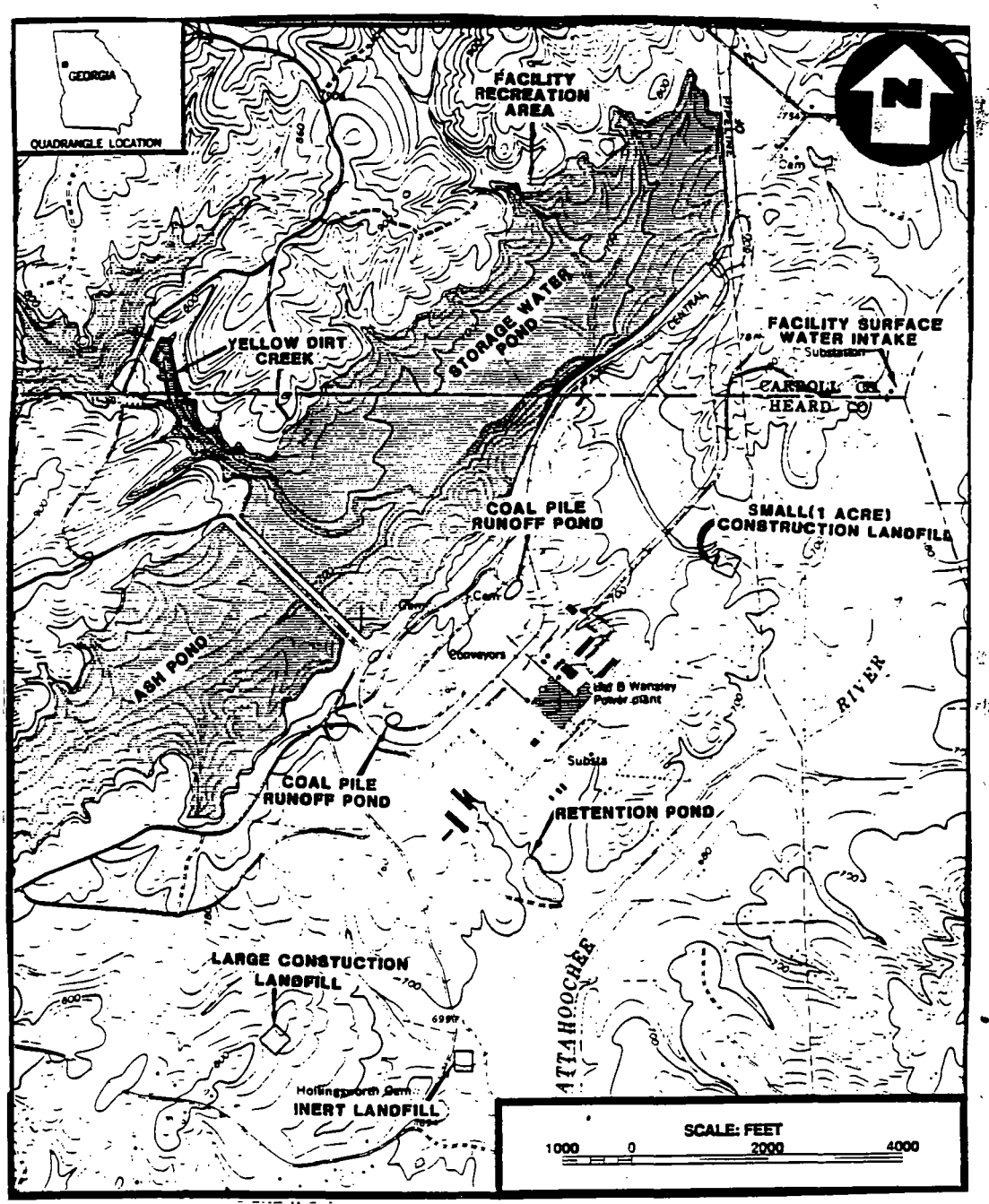
GENERAL INFORMATION (continued)

Site Sketch: *Provide a sketch of the site. Indicate all pertinent features of the site and nearby* environments including: sources of wastes, areas of visible and buried wastes, buildings, residences, access roads, parking areas, fences, fields, drainage patterns, water bodies, vegetation, wells, sensitive environments, and other features.



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GENERAL INFORMATION (continued)

Source Descriptions: Describe all sources at the site. Identify source type and relate to waste disposal operations. Provide source dimensions and the best available waste quantity information. Describe the condition of sources and all containment structures. Cite references.

SOURCE TYPES

Landfill: A man-made (by excavation or construction) or natural hole in the ground into which wastes have come to be disposed by backfilling, or by contemporaneous soil deposition with waste disposal.

Surface Impoundment: A natural topographic depression, man-made excavation, or diked area, primarily formed from earthen materials (lined or unlined) designed to hold an accumulation of liquid wastes, wastes containing free liquids, or sludges not backfilled or otherwise covered; depression may be wet with exposed liquid or dry if deposited liquid has evaporated, volatilized or leached; structures that may be described as lagoon, pond, aeration pit, settling pond, tailings pond, sludge pit; also a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled).

Drums: A portable container designed to hold a standard 55-gallon volume of wastes.

Tanks and Non-Drum Containers: Any device other than drums designed to contain an accumulation of waste that provides structural support and is constructed primarily of fabricated materials (such as wood, concrete, steel, or plastic); any portable or mobile device in which waste is stored or otherwise handled.

Contaminated Soil: An area or volume of soil onto which hazardous substances have been spilled, spread, disposed, or deposited.

Pile: Any non-containerized accumulation above the ground surface of solid, non-flowing wastes; includes open dumps. Some types of waste piles are:

- Chemical Waste Pile: A pile consisting primarily of discarded chemical products, by-products, radioactive wastes, or used or unused feedstocks.
- Scrap Metal or Junk Pile: A pile consisting primarily of scrap metal or discarded durable goods (such as appliances, automobiles, auto parts, batteries, etc.) composed of materials containing hazardous substances.
- Tailings Pile: A pile consisting primarily of any combination of overburden from a mining operation and tailings from a mineral mining, beneficiation, or processing operation.
- Trash Pile: A pile consisting primarily of paper, garbage, or discarded non-durable goods containing hazardous substances.

Land Treatment: Landfarming or other land treatment method of waste management in which liquid wastes or sludges are spread over land and tilled, or liquids are injected at shallow depths into soils.

Other: Sources not in categories listed above.

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GENERAL INFORMATION (continued)

Source Description: Include description of containment per pathway for ground water (see HRS Table 3-2), surface water (see HRS Table 4-2), and air (see HRS Tables 6-3 and 6-9).

* Ash Pond (Surface Impoundment) -- an unlined lake for the deposition of fly ash and boiler cleaner waste
* Large Construction L'fill -- for construction debris (inactive)
* Small " " -- " " " "
* Inert Landfill -- for inert materials (inactive)
* Retention Pond -- Catchment for overflow from ash pond. Also retains cooling waters from plant
* Coal Runoff Ponds -- Catchment for rain runoff from coal piles

Hazardous Waste Quantity (HWQ) Calculation: SI Tables 1 and 2 (See HRS Tables 2-5, 2-6, and 5-2)

(1) surface impoundment (ash pond)
average length: 7,000 feet
average width: 1,000 feet
7,000,000 sq ft ÷ ~~34,000~~ = ~~206~~ (se) (se)
(160.69 acres) → 13 = ~~568,576~~.
538,462

(2) Land Fill 1 = 5 acres
2 - 5 acres
3 = 1 acres
11 acres ÷ 0.078 = 141

(3) Coal Runoff Ponds 2 acres ÷ 0.00029 = 6897

(4) Retention Pond 300,000 sq ft ÷ 13 = 23,076

~~568,576~~ + 141 + 6897 + 23,076 = ~~598,690~~ 568,576
538,462

(greater than 10,000; less than 1 million)

Attach additional pages, if necessary

HWQ = 10,000

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SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES

		Single Source Sites (assigned HWQ scores)	
(Column 1) TIER	(Column 2) Source Type	(Column 3) HWQ = 10	(Column 4) HWQ = 100
A Hazardous Constituent Quantity	N/A	HWQ = 1 if Hazardous Constituent Quantity data are complete HWQ = 10 if Hazardous Constituent Quantity data are not complete	>100 to 10,000 lbs
B Wastestream	N/A	≤ 500,000 lb.	>500,000 to 50 million lbs
C Volume	Landfill	≤ 6.75 million ft^3 ≤ 250,000 yd^3	>6.75 million to 675 million ft^3 >250,000 to 25 million yd^3
	Surface impoundment	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3
	Drums	≤1,000 drums	>1,000 to 100,000 drums
	Tanks and non-drum containers	≤50,000 gallons	>50,000 to 5 million gallons
	Contaminated soil	≤6.75 million ft^3 ≤250,000 yd^3	>6.75 million to 675 million ft^3 >250,000 to 25 million yd^3
	Pile	≤6,750 ft3 ≤250 yd3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3
	Other	≤6,750 ft^3 ≤250 yd^3	>6,750 to 675,000 ft^3 >250 to 25,000 yd^3
D Area	Landfill	≤340,000 ft^3 ≤7.8 acres	>340,000 to 34 million ft^2 >7.8 to 780 acres
	Surface impoundment	≤1,300 ft^3 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres
	Contaminated soil	≤3.4 million ft^3 ≤0.029 acres	> 3.4 million to 340 million ft^2 > 78 to 7,800 acres
	Pile	≤1,300 ft^3 ≤0.029 acres	>1,300 to 130,000 ft^2 >0.029 to 2.9 acres
	Land treatment	≤27,000 ft^3 ≤0.62 acres	>27,000 to 2.7 million ft^2 >0.62 to 62 acres

TABLE 1 (CONTINUED)

Single Source Sites (assigned HWQ scores)		Multiple Source Sites		
(Column 5) HWQ = 10,000	(Column 6) HWQ = 1,000,000	(Column 7) Divisors for Assigning Source WQ Values	(Column 2) Source Type	(Column 1) TIER
>10,000 to 1 million lbs	> 1 million lbs	lbs ÷ 1	N/A	A Hazardous Constituent Quantity
>50 million to 5 billion lbs	> 5 billion lbs	lbs ÷ 5,000	N/A	B Wastestream
>675 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	> 67.5 billion ft^3 > 2.5 billion yd^3	ft^3 ÷ 67,500 yd^3 ÷ 2,500	Landfill	C Volume
>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	> 67.5 million ft^3 > 2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Surface Impoundment	
>100,000 to 10 million drums	> 10 million drums	drums ÷ 10	Drums	
>5 million to 500 million gallons	> 500 million gallons	gallons ÷ 500	Tanks and non-drum containers	
>675 million to 67.5 billion ft^3 >25 million to 2.5 billion yd^3	> 67.5 billion ft^3 > 2.5 billion yd^3	ft^3 ÷ 67,500 yd^3 ÷ 2,500	Contaminated Soil	
>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	> 67.5 million ft^3 > 2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Pile	
>675,000 to 67.5 million ft^3 >25,000 to 2.5 million yd^3	> 67.5 million ft^3 > 2.5 million yd^3	ft^3 ÷ 67.5 yd^3 ÷ 2.5	Other	
>34 million to 3.4 billion ft^2 >780 to 78,000 acres	> 3.4 billion ft^2 >78,000 acres	ft^2 ÷ 3,400 acres ÷ 0.078	Landfill	D Area
>130,000 to 13 million ft^2 >2.9 to 290 acres	> 13 million ft^2 > 290 acres	ft^2 ÷ 13 acres ÷ 0.00029	Surface Impoundment	
> 340 million to 34 billion ft^2 > 7,800 to 780,000 acres	> 34 billion ft^2 > 780,000 acres	ft^2 ÷ 34,000 acres ÷ 0.78	Contaminated Soil	
> 130,000 to 13 million ft^2 > 2.9 to 290 acres	> 13 million ft^2 > 290 acres	ft^2 ÷ 13 acres ÷ 0.00029	Pile	
>2.7 million to 270 million ft^2 >62 to 6,200 acres	> 270 million ft^2 > 6,200 acres	ft^2 ÷ 270 acres ÷ 0.0062	Land Treatment	

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HAZARDOUS WASTE QUANTITY (HWQ) CALCULATION

For each migration pathway, evaluate HWQ associated with sources that are available (i.e., incompletely contained) to migrate to that pathway. (Note: If *Actual Contamination Targets* exist for ground water, surface water, or air migration pathways, assign the calculated HWQ score or 100, whichever is greater, as the HWQ score for that pathway.) For each source, evaluate HWQ for one or more of the four tiers (SI Table 1; HRS Table 2-5) for which data exist: constituent quantity, wastestream quantity, source volume, and source area. Select the tier that gives the highest value as the source HWQ. Select the source volume HWQ rather than source area HWQ if data for both tiers are available.

Column 1 of SI Table 1 indicates the quantity tier. Column 2 lists source types for the four tiers. Columns 3, 4, 5, and 6 provide ranges of waste amount for sites with only one source, corresponding to HWQ scores at the tops of the columns. Column 7 provides formulas to obtain source waste quantity values at sites with multiple sources.

1. Identify each source type.
2. Examine all waste quantity data available for each source. Record constituent quantity and waste stream mass or volume. Record dimensions of each source.
3. Convert source measurements to appropriate units for each tier to be evaluated.
4. For each source, use the formulas in the last column of SI Table 1 to determine the waste quantity value for each tier that can be evaluated. Use the waste quantity value obtained from the highest tier as the quantity value for the source.
5. Sum the values assigned to each source to determine the total site waste quantity.
6. Assign HWQ score from SI Table 2 (HRS Table 2-6).

Note these exceptions to evaluate soil exposure pathway HWQ (see HRS Table 5-2):

- The divisor for the area (square feet) of a landfill is 34,000.
- The divisor for the area (square feet) of a pile is 34.
- Wet surface impoundments and tanks and non-drum containers are the only sources for which volume measurements are evaluated for the soil exposure pathway.

SI TABLE 2: HWQ SCORES FOR SITES

Site WQ Total	HWQ Score
> 0 to 100	10
> 100 to 10,000	100
> 10,000 to 1 million	10,000
> 1 million	1,000,000

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Ground Water Observed Release Substances Summary Table

On SI Table 4, list the hazardous substances associated with the site detected in ground water samples for that aquifer. Include only those substances directly observed or with concentrations significantly greater than background levels. Obtain toxicity values from the Superfund Chemical Data Matrix (SCDM). Assign mobility a value of 1 for all observed release substances regardless of the aquifer being evaluated. For each substance, multiply the toxicity by the mobility to obtain the toxicity/mobility factor value; enter the highest toxicity/mobility value for the aquifer in the space provided.

Ground Water Actual Contamination Targets Summary Table

If there is an observed release at a drinking water well, enter each hazardous substance meeting the requirements for an observed release by well and sample ID on SI Table 5, and record the detected concentration. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sums calculated for cancer risk or reference dose equal or exceed 100%, evaluate the population using the well as Level I targets. If these percentages are less than 100% or all are N/A, evaluate the population using the well as Level II targets for that aquifer.

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SI TABLE 3: WASTE CHARACTERIZATION WORKSHEET

Site Name: Georgia Power - Wansley Steam Plant

References 6 (SI Report)

Sources:

1. Ash Pond (Temporarily out)
2. Future Construction Landfill
3.
4.
5. Coal Runoff Pond, NE
6. Retention Pond
7. Coal Runoff Pond, SE
8.
9.

SOURCE	HAZARDOUS SUBSTANCE	TOXICITY	GROUND WATER PATHWAY		SURFACE WATER PATHWAY											All GWS Mobility
					OVERLAND/FLOOD MIGRATION							GROUND WATER TO SURFACE WATER				
			GW Mobility (HRS Table 3-8)	Tox/ Mobility Value (HRS Table 3-9)	Per (HRS Table 4-10 and 4-11)	Tox/Per Value (HRS Table 4-12)	Bioac Pot. (HRS Table 4-15)	Tox/ Pers/ Bioac Value (HRS Table 4-16)	Ecotox (HRS Table 4-19)	Ecotox/ Pers (HRS Table 4-20)	Ecotox/ Pers/ Bioacc Value (HRS Table 4-21)	Tox/ Mob/ Pers Value (HRS Table 4-26)	Tox/ Mob/ Pers/ Bioacc Value (HRS Table 4-26)	Ecotox/ Mob/ Pers Value (HRS Table 4-28)	Ecotox/ Mob/ Per/ Bioacc Value (HRS Table 4-28)	
5,7.	Nickel	10,000	1×10^{-2}	100	1	10,000	0.5	5,000	10	10	5,000					—
5	Zinc	10	1×10^{-2}	0.1	1	10	500	5,000	10	10	5,000					—
7,1,5,6	Manganese	10,000	1×10^{-2}	100	1	10,000	50,000	5×10^{8}	—	—	—					—
5	Phenanthrene	1	1×10^{-4}	1×10^{-4}	0.4	0.4	50	20	1000	400	2×10^{5}					0.02
1,7	Delta-BHC	1	1×10^{-2}	0.01	1	1	5	5	—	—	—					0.02
5,7	Endosulfan sulfate	—	1×10^{-2}	—	1	—	5,000	—	—	—	—					1
1,2	Arsenic	10,000	1×10^{-2}	100	1	10,000	5	50,000	10	10	500					—
1	Thallium	1,000	1×10^{-4}	0.1	1	1,000	0.5	500	—	—	—					—
5,6,7	Cobalt	100	1×10^{-2}	1	1	100	5,000	5×10^{5}	—	—	—					—
6	Selenium	100	1×10^{-2}	1	1	100	5,000	5×10^{5}	100	100	5×10^{5}					—
1,6	Chromium	10,000	1×10^{-2}	100	1	10,000	5	50,000	10,000	10,000	50,000					—
7	barium	10	1×10^{-2}	0.1	1	10	0.5	5	1	1	0.5					—

~~FreOA = Trichlorofluoroethane~~

SI TABLE 4: GROUND WATER OBSERVED RELEASE SUBSTANCES (BY AQUIFER)

Sample ID	Hazardous Substance	Bckgrd. Conc.	Toxicity/ Mobility	Reference
GP TW 01, 03, 04	Barium	3U	10 0.1	C, p. 29
TW 01, 03	Chromium	6U	10,000 100	
TW 01, 03	Cobalt	4U	100 1	
TW 01, 03, 04	Manganese	20U	10,000 10	
		Highest Toxicity/Mobility	10,000 100	

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SI TABLE 5: GROUND WATER ACTUAL CONTAMINATION TARGETS

Well ID: _____ Level I _____ Level II _____ Population Served _____ References _____

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	Reference Dose	% of Reference Dose
			Highest Percent		Sum of Percents		Sum of Percents	

Well ID: _____ Level I _____ Level II _____ Population Served _____ References _____

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	Reference Dose	% of Reference Dose
			Highest Percent		Sum of Percents		Sum of Percents	

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GROUND WATER PATHWAY
GROUND WATER USE DESCRIPTION

Describe Ground Water Use within 4 Miles of the Site:
Describe generalized stratigraphy, aquifers, municipal and private wells

Some portions of the study area are provided with municipal water obtained from surface water sources. The majority of the area obtains water from the unconfined residual soil / crystalline rock aquifer from private wells.

Show Calculations of Ground Water Drinking Water Populations for each Aquifer:
Provide apportionment calculations for blended supply systems.
County average number of persons per household: 2.75 Reference 1, 21

* Private wells are the only wells in 4 mile radius

0 - 1/4 mile: 0 wells
1/4 - 1/2 mile: 14 wells, 39 individuals (14 x 2.75)
1/2 - 1 mile: 23 wells, 63 " (23 x ")
1 - 2 miles: 110 wells, 302 " (110 x ")
2 - 3 miles: 198 wells, 544 " (198 x ")
3 - 4 miles: 220 wells, 605 " (220 x ")

1553 total population served by groundwater wells in 4-mile radius

GROUND WATER PATHWAY WORKSHEET

LIKELIHOOD OF RELEASE	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation supports a release to the aquifer, assign a score of 550. Record observed release substances on SI Table 4.	550	H	6
2. POTENTIAL TO RELEASE: Depth to aquifer: _____ feet. If sampling data do not support a release to the aquifer, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340 Optionally, evaluate potential to release according to HRS Section 3.	0		-
LR =	550		

TARGETS

Are any wells part of a blended system? Yes____ No X If yes, attach a page to show apportionment calculations.			
3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any target drinking water well for the aquifer has been exposed to a hazardous substance from the site, evaluate the factor score for the number of people served (SI Table 5). Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ **Total =**	0	H	6
4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water wells for the aquifer or overlying aquifers that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 6a or 6b. Sum the population values and multiply by 0.1.	25.4 SI ~~263~~	H	6
5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets for the aquifer or overlying aquifer. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking water wells exist within 4 miles, assign 0.	18	H	1
6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA for the aquifer, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles; otherwise assign 0.	0	H	
7. RESOURCES: Assign a score of 5 if one or more ground water resources applies; assign 0 if none applies. • Irrigation (5 acre minimum) of commercial food crops or commercial forage crops • Watering of commercial livestock • Ingredient in commercial food preparation • Supply for commercial aquaculture • Supply for a major or designated water recreation area, excluding drinking water use	5	H	6
Sum of Targets T=	~~495~~ 48.4		SP

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SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUND WATER TARGET POPULATIONS

SI Table 6a: Other Than Karst Aquifers

Distance from Site	Pop.	Nearest Well (choose highest)	Population Served by Wells within Distance Category: 1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,000 to 3,000,000	Pop Value	Ref.
0 to $\frac{1}{4}$ mile	0	20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455	0	1, 2, 1
> $\frac{1}{4}$ to $\frac{1}{2}$ mile	34	(18)	2	11	(33)	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122	33	
> $\frac{1}{4}$ to 1 mile	63	9	1	5	(17)	52	167	523	1,669	5,224	16,684	52,239	166,835	522,385	17	
> 1 to 2 miles	302	5	0.7	3	10	30	(94)	294	939	2,939	9,385	29,384	93,845	293,842	94	
> 2 to 3 miles	544	3	0.5	2	7	21	(68)	212	678	2,122	6,778	21,222	67,777	212,219	68	
>3 to 4 miles	605	2	0.3	1	4	13	(42)	131	417	1,306	4,171	13,060	41,709	130,596	42	
Nearest Well =		18												**Score =**	254	

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUND WATER TARGET POPULATIONS (continued)

SI Table 6b: Karst Aquifers

Distance from Site	Pop.	Nearest Well (choose highest)	Population Served by Wells within Distance Category												Pop Value	Ref.
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,000 to 3,000,000		
0 to $\frac{1}{4}$ mile		20	4	17	53	164	522	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455		
$>\frac{1}{4}$ to $\frac{1}{2}$ mile		20	2	11	33	102	324	1,013	3,233	10,122	32,325	101,213	323,243	1,012,122		
$>\frac{1}{2}$ to 1 mile		20	2	9	26	82	261	817	2,607	8,163	26,068	81,623	260,680	816,227		
> 1 to 2 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,623	260,680	816,227		
> 2 to 3 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,623	260,680	816,227		
>3 to 4 miles		20	2	9	26	82	261	817	2,607	8,163	26,068	81,623	260,680	816,227		

Nearest Well = [ ] **Score =** [ ]

GROUND WATER PATHWAY WORKSHEET (concluded)

WASTE CHARACTERISTICS	Score	Data Type	Does not Apply
8. If any Actual Contamination Targets exist for the aquifer or overlying aquifers, assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if no Actual Contamination Targets exist, assign the hazardous waste quantity score calculated for sources available to migrate to groundwater.	10,000	H	
9. Assign the highest ground water toxicity/mobility value from SI Table 3 or 4.	10,000	H	
10. Multiply the ground water toxicity/mobility and waste quantity scores. Assign the Waste Characteristics score from the table below: (from HRS Table 2-7) 1×10^8	100	H	
WC =	100		

Product	WC Score
0	0
>0 to <10	1
10 to <100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to <1E + 05	10
1E + 05 to <1E + 06	18
1E + 06 to <1E + 07	32
1E + 07 to <1E + 08	56
1E + 08 or greater	100

Multiply LR by T and by WC. Divide the product by 82,500 to obtain the groundwater pathway score for each aquifer. Select the highest aquifer score. If the pathway score is greater than 100, assign 100.

GROUND WATER PATHWAY SCORE: $\frac{550 \times 48.4 \times 100}{82,500}$

LR X T X WC =

3.26

(Maximum of 100)

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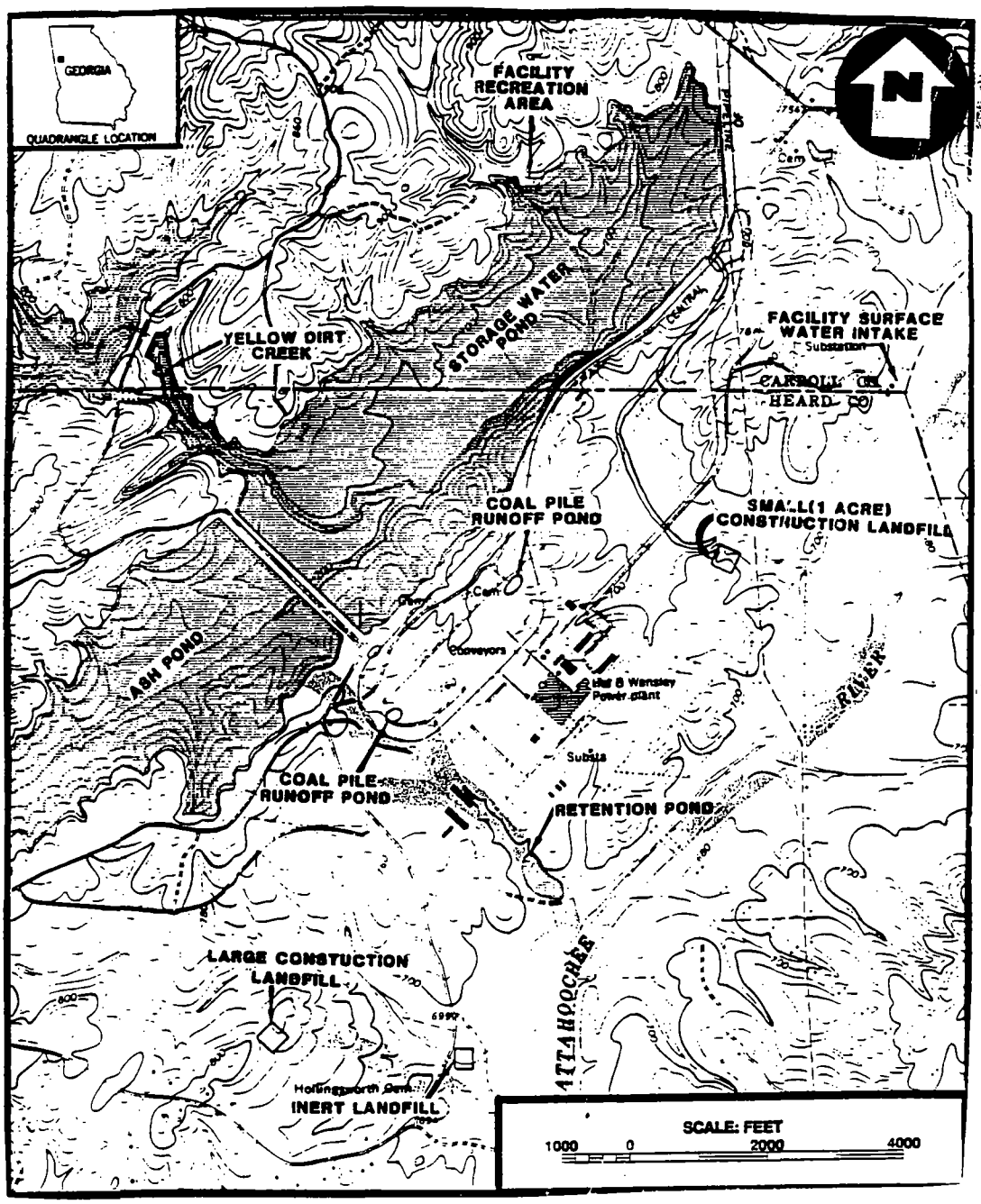
SURFACE WATER PATHWAY

Sketch of the Surface Water Migration Route:
Label all surface water bodies. Include runoff route and drainage direction, probable point of entry and 15-mile target distance limit. Mark sample locations, intakes, fisheries, and sensitive environments. Indicate flow directions and tidal influence. Indicate flow direction and rate.



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SURFACE WATER PATHWAY

Surface Water Observed Release Substances Summary Table

On SI Table 7, list the hazardous substances detected in surface water samples for the watershed, which can be attributed to the site. Include only those substances detected at concentration levels significantly above background levels or in observed releases by direct observation. Obtain toxicity, persistence, bioaccumulation potential, and ecotoxicity values from SCDM. Enter the highest toxicity/persistence, toxicity/persistence/bioaccumulation, and ecotoxicity/persistence/ecobioaccumulation values in the spaces provided.

- TP = Toxicity x Persistence
- TPB = TP x bioaccumulation
- ETPB = EP x bioaccumulation (EP = ecotoxicity* x persistence)

* EP is ecotoxicity/persistence

Drinking Water Actual Contamination Targets Summary Table

For an observed release at or beyond a drinking water intake, on SI Table 8 enter each hazardous substance by sample ID and the detected concentration. For surface water sediment samples detecting a hazardous substance at or beyond an intake, evaluate the intake as Level II contamination. Obtain benchmark, cancer risk, and reference dose concentrations for each substance from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages of the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sums calculated for cancer risk or reference dose equal or exceed 100%, evaluate the population served by the intake as Level I targets. If the percentages are less than 100% or all are N/A, evaluate the population served by the intake as Level II targets.

SI TABLE 7: SURFACE WATER OBSERVED RELEASE SUBSTANCES

Sample ID	Hazardous Substance	Bckgrd. Conc.	Toxicity/ Persistence	Toxicity/ Persis./ Bioaccum	Ecotoxicity/ Persis/ Ecobioaccum	Reference
GPSD04	Arsenic 6.2J	20	10,000	50,000	500	6
	Highest Values		10,000	50,000	500	

SI TABLE 8: SURFACE WATER DRINKING WATER ACTUAL CONTAMINATION TARGETS

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RfD	% of RfD
			Highest Percent		Sum of Percents		Sum of Percents	

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

Sample ID	Hazardous Substance	Conc. (µg/L)	Benchmark Conc. (MCL or MCLG)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	RfD	% of RfD
			Highest Percent		Sum of Percents		Sum of Percents	

SURFACE WATER PATHWAY
LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET

LIKELIHOOD OF RELEASE- OVERLAND/FLOOD MIGRATION	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation supports a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7.	550	H	6
2. POTENTIAL TO RELEASE: Distance to surface water: ____(feet) If sampling data do not support a release to surface water in the watershed, use the table below to assign a score from the table below based on distance to surface water and flood frequency.			

Distance to surface water <2500 feet	500
Distance to surface water >2500 feet, and:	
Site in annual or 10 yr floodplain	500
Site in 100-yr floodplain	400
Site in 500-yr floodplain	300
Site outside 500-yr floodplain	100

Optionally, evaluate surface potential to release according to HRS Section 4.1.2.1.2

LR = 550

LIKELIHOOD OF RELEASE GROUND WATER TO SURFACE WATER MIGRATION	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation supports a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7 NOTE: Calculate ground water to surface water migration only for a surface water body that meets all of the following conditions: 1) A portion of the surface water is within 1 mile of site sources having a containment factor greater than 0. 2) No aquifer discontinuity is established between the source and the above portion of the surface water body. 3) The top of the uppermost aquifer is at or above the bottom of the surface water Elevation of top of uppermost aquifer _____ Elevation of bottom of surface water body _____			
2. POTENTIAL TO RELEASE: Use the ground water potential to release. Optionally, evaluate surface water potential to release according to HRS Section 3.1.2.			

LR =

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SURFACE WATER PATHWAY
LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET (CONTINUED)

DRINKING WATER THREAT TARGETS	Score	Data Type	Refs
Record the water body type, flow, and number of people served by each drinking water intake within the target distance limit in the watershed. If there is no drinking water intake within the target distance limit, assign 0 to factors 3, 4, and 5. Intake Name / Water Body Type / Flow / People Served _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ Are any intakes part of a blended system? Yes _____ No _____ If yes, attach a page to show apportionment calculations. 3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates a drinking water intake has been exposed to a hazardous substance from the site, list the intake name and evaluate the factor score for the drinking water population (SI Table 8). _____ , _____ Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ **Total =**	0	H	
4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water intakes for the watershed that have not been exposed to a hazardous substance from the site. Assign the population values from SI Table 9. Sum the values and multiply by 0.1.	0	H	
5. NEAREST INTAKE: Assign a score of 50 for any Level I Actual Contamination Drinking Water Targets for the watershed. Assign a score of 45 if there are Level II targets for the watershed, but no Level I targets. If no Actual Contamination Drinking Water Targets exist, assign a score for the intake nearest the PPE from SI Table 9. If no drinking water intakes exist, assign 0.	0	H	
6. RESOURCES: Assign a score of 5 if one or more surface water resources applies; assign 0 if none applies. • Irrigation (5 acre minimum) of commercial food crops or commercial forage crops • Watering of commercial livestock • Ingredient in commercial food preparation • Major or designated water recreation area, excluding drinking water use	5	H	1
SUM OF TARGETS T=	5		

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SI Table 9 (From HRS Table 4-14): DILUTION-WEIGHTED POPULATION VALUES FOR POTENTIAL CONTAMINATION FOR SURFACE WATER MIGRATION PATHWAY

Type of Surface Water Body	Pop.	Nearest Intake	Number of people									Pop. Value
			0	1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	
Minimal Stream (<10 cfs)		20	0	4	17	53	164	522	1,633	5,214	16,325	
Small to moderate stream (10 to 100 cfs)		2	0	0.4	2	5	16	52	163	521	1,633	
Moderate to large stream (> 100 to 1,000 cfs)		0	0	0.04	0.2	0.5	2	5	16	52	163	
Large Stream to river (>1,000 to 10,000 cfs)		0	0	0.004	0.02	0.05	0.2	0.5	2	5	16	
Large River (> 10,000 to 100,000 cfs)		0	0	0	0.002	0.005	0.02	0.05	0.2	0.5	16	
Very Large River (>100,000 cfs)		0	0	0	0	0.001	0.002	0.005	0.02	0.05	0.2	
Shallow ocean zone or Great Lake (depth < 20 feet)		0	0	0	0.002	0.005	0.02	0.05	0.2	0.5	2	
Moderate ocean zone or Great Lake (Depth 20 to 200 feet)		0	0	0	0	0.001	0.002	0.005	0.02	0.05	0.2	
Deep ocean zone or Great Lake (depth > 200 feet)		0	0	0	0	0	0.001	0.003	0.008	0.03	0.08	
3 mile mixing zone in quiet flowing river (≥ 10 cfs)		10	0	2	9	26	82	261	817	2,607	8,163	
		Nearest Intake =									Total =	

References _____

SURFACE WATER PATHWAY

Human Food Chain Actual Contamination Targets Summary Table

On SI Table 10, list the hazardous substances detected in sediment, aqueous, sessile benthic organism tissue, or fish tissue samples (taken from fish caught within the boundaries of the observed release) by sample ID and concentration. Evaluate fisheries within the boundaries of observed releases detected by sediment or aqueous samples as Level II, if at least one observed release substance has a bioaccumulation potential factor value of 500 or greater (see SI Table 7). Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For FFDAAL benchmarks, determine the highest percentage of benchmark obtained for any substances. For cancer risk and reference dose, sum the percentages for the substances is listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage sums calculated for cancer risk or reference dose equal or exceed 100%, evaluate this portion of the fishery as subject to Level I concentrations. If the percentages are less than 100% or all are N/A, evaluate the fishery as a Level II target.

Sensitive Environment Actual Contamination Targets Summary Table

On SI Table 11, list each hazardous substance detected in aqueous or sediment samples at or beyond wetlands or a surface water sensitive environment by sample ID. Record the concentration. If contaminated sediments or tissues are detected at or beyond a sensitive environment, evaluate the sensitive environment as Level II. Obtain benchmark concentrations from SCDM. For AWOC/AALAC benchmarks, determine the highest percentage of benchmark of the substances detected in aqueous samples. If benchmark concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage equals or exceeds 100%, evaluate that part of the sensitive environment subject to Level I concentrations. If the percentages are less than 100%, or all are N/A, evaluate the sensitive environment as Level II.

SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: Chatta Inocchio R. Sample Type Sediment Level I ✓ Level II ____ References 6

Sample ID	Hazardous Substance	Conc. (mg/kg)	Benchmark Concentration (FDAAL)	% of Benchmark	Cancer Risk Concentration.	% of Cancer Risk Concentration	RId	% of RId
GP SD 04	Arsenic	6.2 J	—	—	0.00074	> 100	0.39	> 100
			Highest Percent	—	Sum of Percents	> 100	Sum of Percents	> 100

SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

Sample ID	Hazardous Substance	Conc.. (µg/L)	Benchmark Concentration (AWQC or AALAC)	% of Benchmark
			Highest Percent	

References _____

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

Sample ID	Hazardous Substance	Conc.. (µg/L)	Benchmark Concentration (AWQC or AALAC)	% of Benchmark
			Highest Percent	

References _____

SURFACE WATER PATHWAY (continued)
HUMAN FOOD CHAIN THREAT WORKSHEET

HUMAN FOOD CHAIN THREAT TARGETS	Score	Data Type	Refs
Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page.			

Fishery Name	Water Body Type	Flow
Chattahoochee R.	River	7069 cfs
		cfs
		cfs
		cfs
		cfs

FCI Value =

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I.

45 | H

8. POTENTIAL CONTAMINATION FISHERIES: If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20. If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit.

Lowest Flow	FCI Value
<10 cfs	20
10 to 100 cfs	2
>100 cfs, coastal tidal waters, oceans, or Great Lakes	0

0 | H

SUM OF TARGETS T = 45

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SURFACE WATER PATHWAY (continued)
ENVIRONMENTAL THREAT WORKSHEET

When measuring length of wetlands that are located on both sides of a surface water body, sum both frontage lengths. For a sensitive environment that is more than one type, assign a value for each type. Multiply Level I environment values by 10.

ENVIRONMENTAL THREAT TARGETS	Score	Data Type	Refs

Record the water body type and flow for each surface water sensitive environment within the target distance (see SI Table 12). If there is no sensitive environment within the target distance limit, assign a score of 0 at the bottom of the page.

Environment Name	Water Body Type	Flow
		cfs
		cfs
		cfs
		cfs
		cfs

9. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: If sampling data or direct observation indicates any sensitive environment has been exposed to a hazardous substance from the site, record this information on SI Table 11, and assign a factor value for the environment (SI Tables 13 and 14).

Environment Name	Environment Type and Value (SI Tables 13 & 14)	Multiplier (10 for Level I, 1 for Level II)	Product
		x =	
		x =	
		x =	
		x =	
		Sum =	0

Data Type: H

10. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS:

Flow	Dilution Weight (SI Table 12)	Environment Type and Value (SI Tables 13 & 14)	Pot. Cont.	Product
cfs	x	x	0.1 =	
cfs	x	x	0.1 =	
cfs	x	x	0.1 =	
cfs	x	x	0.1 =	
cfs	x	x	0.1 =	
			Sum =	0

Data Type: H

T = 0

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SI TABLE 12 (HRS Table 4-13): SURFACE WATER DILUTION WEIGHTS

Type of Surface Water Body		Assigned Dilution Weight
Descriptor	**Flow Characteristics**	
Minimal stream	< 10 cfs	1
Small to moderate stream	10 to 100 cfs	0.1
Moderate to large stream	> 100 to 1,000 cfs	0.01
Large stream to river	> 1,000 to 10,000 cfs	0.001
Large river	> 10,000 to 100,000 cfs	0.0001
Very large river	> 100,000 cfs	0.00001
Coastal tidal waters	Flow not applicable; depth not applicable	0.001
Shallow ocean zone or Great Lake	Flow not applicable; depth less than 20 feet	0.001
Moderate depth ocean zone or Great Lake	Flow not applicable; depth 20 to 200 feet	0.0001
Deep ocean zone or Great Lake	Flow not applicable; Depth greater than 200 feet	0.000005
3-mile mixing zone in quiet flowing river	10 cfs or greater	0.5

SI TABLE 13 (HRS TABLE 4-23): SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

SENSITIVE ENVIRONMENT	*ASSIGNED VALUE*
Critical habitat for Federally designated endangered or threatened species Marine Sanctuary National Park Designated Federal Wilderness Area Ecologically important areas identified under the Coastal Zone Wilderness Act Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes) National Monument (air pathway only) National Seashore Recreation Area National Lakeshore Recreation Area	100
Habitat known to be used by Federally designated or proposed endangered or threatened species National Preserve National or State Wildlife Refuge Unit of Coastal Barrier Resources System Coastal Barrier (undeveloped) Federal land designated for the protection of natural ecosystems Administratively Proposed Federal Wilderness Area Spawning areas critical for the maintenance for fish/shellfish species within a river system, bay, or estuary Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding National river reach designated as recreational	75
Habitat known to be used by State designated endangered or threatened species Habitat known to be used by a species under review as to its Federal endangered or threatened status Coastal Barrier (partially developed) Federally designated Scenic or Wild River	50
State land designated for wildlife or game management State designated Scenic or Wild River State designated Natural Area Particular areas, relatively small in size, important to maintenance of unique biotic communities	25
State designated areas for the protection of maintenance of aquatic life under the Clean Water Act	5
Wetlands — See SI Table 14 (Surface Water Pathway) or SI Table 23 (Air Pathway)	

SI TABLE 14 (HRS TABLE 4-24): SURFACE WATER WETLANDS FRONTAGE VALUES

Total Length of Wetlands	Assigned Value
Less than 0.1 mile	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 16	350
Greater than 16 to 20	450
Greater than 20 miles	500

SURFACE WATER PATHWAY (concluded)
WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

WASTE CHARACTERISTICS

		Score	
14.	If an Actual Contamination Target (drinking water human food chain or environmental threat exists for the watershed, assign the calculated hazardous waste quantity score, or a score of 100, whichever is greater.	10,000	
15.	Assign the highest value from SI Table 7 (observed release) or SI Table 3 (no observed release) for the hazardous substance waste characterization factors below. Multiply each by the surface water waste quantity score and determine the waste characteristics score for each threat.	**WC Score (From Table) (Maximum of 100)**	

	Substance Value		HWQ		Product
Drinking Water Threat Toxicity/Persistence	10,000	x	10,000	=	1×10^8
Food Chain Threat Toxicity/Persistence/ Bioaccumulation	5×10^8	x	10,000	=	5×10^{12}
Environmental Threat Ecotoxicity/Persistence/ Ecobioaccumulation	5×10^5	x	10,000	=	5×10^9

WC Score (From Table) (Maximum of 100)
100
1000
180

Product	WC Score
0	0
>0 to <10	1
10 to <100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to <1E + 05	10
1E + 05 to <1E + 06	18
1E + 06 to <1E + 07	32
1E + 07 to <1E + 08	56
1E + 08 to <1E + 09	100
1E + 09 or greater	1000

SURFACE WATER PATHWAY THREAT SCORES

Threat	Likelihood of Release (LR) Score	Targets (T) Score	Pathway Waste Characteristics (WC) Score (determined above)	Threat Score LR x T x WC = ____/82,500
Drinking Water	550	5	100	(maximum of 100) 3.3
Human Food Chain	550	45	1000	(maximum of 100) 100
Environmental	550	0	180	(maximum of 60) 0

SURFACE WATER PATHWAY SCORE (Drinking Water Threat + Human Food Chain Threat + Environmental Threat)

(maximum of 100) 100

SOIL EXPOSURE PATHWAY

If there is no observed contamination (e.g., ground water plume with no known surface source), do not evaluate the soil exposure pathway. Discuss evidence for no soil exposure pathway.

Soil Exposure Resident Population Targets Summary

If there is an area of observed contamination on the property and within 200 feet of a residence, school, or day care center, enter on Table 15 each hazardous substance by sample ID. Record the detected concentration. Obtain cancer risk, and reference dose concentrations from SDCM. Sum the cancer risk and reference dose percentages for the substances listed. If cancer risk or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the percentage sums calculated for cancer risk or reference dose equal or exceed 100%, evaluate the residents and students as Level I. If both percentages are less than 100% or all are N/A, evaluate the targets as Level II.

SI TABLE 15: SOIL EXPOSURE RESIDENT POPULATION TARGETS

Residence ID: ______________ Level I ____ Level II ____ Population ______________

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	% of Cancer Risk Conc.	RfD	% of RfD	Toxicity Value	References
			Highest Percent		Sum of Percents		Sum of Percents	

Residence ID: ______________ Level I ____ Level II ____ Population ______________

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	% of Cancer Risk Conc.	RfD	% of RfD	Toxicity Value	References
			Highest Percent		Sum of Percents		Sum of Percents	

Residence ID: ______________ Level I ____ Level II ____ Population ______________

Sample ID	Hazardous Substance	Conc. (mg/kg)	Cancer Risk Concentration	% of Cancer Risk Conc.	RfD	% of RfD	Toxicity Value	References
			Highest Percent		Sum of Percents		Sum of Percents	

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SOIL EXPOSURE PATHWAY WORKSHEET
RESIDENT POPULATION THREAT

LIKELIHOOD OF EXPOSURE	Score	Data Type	Refs
1. OBSERVED CONTAMINATION: If evidence indicates presence of observed contamination (depth of 2 feet or less), assign a score of 550; otherwise, assign a 0. Note that a likelihood of exposure score of 0 results in a soil exposure pathway score of 0	550	H	6
LE =	550		

TARGETS

2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or day care on or within 200 feet of areas of observed contamination (SI Table 16 and HRS section 5.1.3). Level I: _____ people x 10 = _____ Level II: _____ people x 1 = _____ **Sum =**	0	H	6
3. RESIDENT INDIVIDUAL: Assign a score of 50 if any Level I resident population exists. Assign a score of 45 if there are Level II targets but no Level I targets. If no resident population exists, assign 0 (HRS Section 5.1.3).	0	H	6
4. WORKERS: Assign a score from the table below for the total number of workers at the site and nearby facilities with areas of observed contamination associated with the site.	10	H	5
5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Assign a value for each terrestrial sensitive environment (SI Table 16) on an area of observed contamination. **Sum =**	0	H	6
6. RESOURCES: Assign a score of 5 if any one or more of the following resources are present on an area of observed contamination at the site; assign 0 if none applies. • Commercial agriculture • Commercial silviculture • Commercial livestock production or commercial livestock grazing	0	H	
Total of Targets T=	10		

Number of Workers	Score
0	0
1 to 100	5
→ 101 to 1,000 ←	10
>1,000	15

Terrestrial Sensitive Environment Type	Value

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SI TABLE 16 (HRS TABLE 5-5): SOIL EXPOSURE PATHWAY TERRESTRIAL SENSITIVE ENVIRONMENT VALUES

TERRESTRIAL SENSITIVE ENVIRONMENT	*ASSIGNED VALUE*
Terrestrial critical habitat for Federal designated endangered or threatened species National Park Designated Federal Wilderness Area National Monument	100
Terrestrial habitat known to be used by Federal designated or proposed threatened or endangered species National Preserve (terrestrial) National or State terrestrial Wildlife Refuge Federal land designated for protection of natural ecosystems Administratively proposed Federal Wilderness Area Terrestrial areas utilized by large or dense aggregations of animals (vertebrate species) for breeding	75
Terrestrial habitat used by State designated endangered or threatened species Terrestrial habitat used by species under review for Federal designated endangered or threatened status	50
State lands designated for wildlife or game management State designated Natural Areas Particular areas, relatively small in size, important to maintenance of unique biotic communities	25

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SOIL EXPOSURE PATHWAY WORKSHEET
NEARBY POPULATION THREAT

LIKELIHOOD OF EXPOSURE		Score	Data Type	Ref.
7. Attractiveness/Accessibility (from SI Table 17 or HRS Table 5-6)	Value 100			
Area of Contamination (from SI Table 18 or HRS Table 5-7)	Value 100			
Likelihood of Exposure (from SI Table 19 or HRS Table 5-8)			H	
	LE =	500		

TARGETS	Score	Data Type	Ref.
8. Determine the population within 1 mile travel distance that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 20 (HRS Table 5-10). Sum the population values and multiply by 0.1.	0.17	H	
T =	0.17		

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SI TABLE 17 (HRS TABLE 5-6): ATTRACTIVENESS/ACCESSIBILITY VALUES

Area of Observed Contamination	Assigned Value
Designated recreational Area	100
Regularly used for public recreation (for example, vacant lots in urban area)	75
Accessible and unique recreational area (for example, vacant lots in urban area)	75
Moderately accessible (may have some access improvements–for example, gravel road) with some public recreation use	50
Slightly accessible (for example, extremely rural area with no road improvement) with some public recreation use	25
Accessible with no public recreation use	10
Surrounded by maintained fence or combination of maintained fence and natural barriers	5
Physically inaccessible to public, with no evidence of public recreation use	0

SI TABLE 18 (HRS TABLE 5-7): AREA OF CONTAMINATION FACTOR VALUES

Total area of the areas of observed contamination (square feet)	Assigned Value
≥ to 5,000	5
> 5,000 to 125,000	20
> 125,000 to 250,000	40
> 250,000 to 375,000	60
> 375,000 to 500,000	80
> 500,000	100

SI TABLE 19 (HRS TABLE 5-8): NEARBY POPULATION LIKELIHOOD OF EXPOSURE FACTOR VALUES

AREA OF CONTAMINATION FACTOR VALUE	ATTRACTIVENESS/ACCESSIBILITY FACTOR VALUE						
	100	75	50	25	10	5	0
100	500	500	375	250	125	50	0
80	500	375	250	125	50	25	0
60	375	250	125	50	25	5	0
40	250	125	50	25	5	5	0
20	125	50	25	5	5	5	0
5	50	25	5	5	5	5	0

SI TABLE 20 (HRS TABLE 5-10): DISTANCE-WEIGHTED POPULATION VALUES FOR NEARBY POPULATION THREAT

Travel Distance Category (miles)	Pop.	Number of people within the travel distance category											
		0	1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,001	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000
Greater than 0 to $\frac{1}{4}$	0	0	0.1	0.4	1.0	4	13	41	130	408	1,303	4,081	13,034
Greater than $\frac{1}{4}$ to $\frac{1}{2}$	391	0	0.05	0.2	0.7	2	7	20	65	204	652	2,041	6,517
Greater than $\frac{1}{2}$ to 1	187	0	0.02	0.1	0.3	1	3	10	33	102	326	1,020	3,258

1.7

SOIL EXPOSURE PATHWAY WORKSHEET (concluded)

WASTE CHARACTERISTICS

9.	Assign the hazardous waste quantity score calculated for soil exposure	10,000
10.	Assign the highest toxicity value from SI Table 16	10,000
11.	Multiply the toxicity and waste quantity scores. Assign the Waste Characteristics score from the table below: product = 1×10^8	WC = 100

Product	WC Score
0	0
>0 to <10	1
10 to <100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to <1E + 05	10
1E + 05 to <1E + 06	18
1E + 06 to <1E + 07	32
1E + 07 to <1E + 08	56
1E + 08 or greater	100

RESIDENT POPULATION THREAT SCORE:

$$LE \times T \times WC = \frac{550 \times 10 \times 100}{82,500} = \frac{550,000}{82,500}$$

6.67 (Maximum of 100)

NEARBY POPULATION THREAT SCORE:

$$LE \times T \times WC = \frac{500 \times 0.17 \times 100}{82,500} = \frac{8500}{82,500}$$

0.1 (Maximum of 100)

SOIL EXPOSURE PATHWAY SCORE:
Resident Population Threat + Nearby Population Threat

6.77 (Maximum of 100)

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AIR PATHWAY

Air Pathway Observed Substances Summary Table

On SI Table 21, list the hazardous substances detected in air samples of a release from the site. Include only those substances with concentrations significantly greater than background levels. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For NAAQS/NESHAPS benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sums calculated for cancer risk or reference dose equal or exceed 100%, evaluate targets in the distance category from which the sample was taken and any closer distance categories as Level I. If the percentages are less than 100% or all are N/A, evaluate targets in that distance category and any closer distance categories that are not Level I as Level II.

SI TABLE 21: AIR PATHWAY OBSERVED RELEASE SUBSTANCES

Sample ID: _____ Level I _____ Level II _____ Distance from Sources (mi) ____ References_____

Hazardous Substance	Conc. (µg/m³)	Gaseous Particulate	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	Rfd	% of Rfd
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

Sample ID: _____ Level I _____ Level II _____ Distance from Sources (mi) ____ References_____

Hazardous Substance	Conc. (µg/m³)	Toxicity/ Mobility	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	Rfd	% of Rfd
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

Sample ID: _____ Level I _____ Level II _____ Distance from Sources (mi) ____ References_____

Hazardous Substance	Conc. (µg/m³)	Toxicity/ Mobility	Benchmark Conc. (NAAQS or NESHAPS)	% of Benchmark	Cancer Risk Conc.	% of Cancer Risk Conc.	Rfd	% of Rfd
	Highest Toxicity/ Mobility		Highest Percent		Sum of Percents		Sum of Percents	

AIR PATHWAY WORKSHEET

LIKELIHOOD OF RELEASE	Score	Data Type	Refs
1. OBSERVED RELEASE: If sampling data or direct observation supports a release to air, assign a score of 550. Record observed release substances on SI Table 21			
2. POTENTIAL TO RELEASE: If sampling data do not support a release to air, assign a score of 500. Optionally, evaluate air migration gaseous and particulate potential to release (HRS Section 6.1.2)	500	H	
LR =	500		

TARGETS

3. ACTUAL CONTAMINATION POPULATION: Determine the number of people within the target distance limit subject to exposure from a release of a hazardous substance to the air. a) Level I: _____ people x 10 = _____ b) Level II: _____ people x 1 = _____ **Total =**	0	H	
4. POTENTIAL TARGET POPULATION: Determine the number of people within the target distance limit not subject to exposure from a release of a hazardous substance to the air, and assign the total population score from SI Table 22.	53.4	H	1, 21, 22
5. NEAREST INDIVIDUAL: Assign a score of 50 if there are any Level I targets. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Population exists, assign the Nearest Individual score from SI Table 22.	20	H	5
6. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: Sum the sensitive environment values (SI Table 13) and wetland acreage values (SI Table 23) for environments subject to exposure from the release of a hazardous substance to the air.	0	H	
7. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS: Use SI Table 24 to evaluate sensitive environments not subject to exposure from a release.	0	H	
8. RESOURCES: Assign a score of 5 if one or more air resources applies within 1/2 mile of a source; assign a 0 if none applies • Commercial agriculture • Commercial silviculture • Major or designated recreation area	5	H	
T =	78.4	H	

Sensitive Environment Type	*Value*
Wetland Acreage	*Value*

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SI TABLE 22 (From HRS TABLE 6-17): VALUES FOR POTENTIAL CONTAMINATION AIR TARGET POPULATIONS

Distance from Site	Pop.	Nearest Individual (choose highest)	Number of People within the Distance Category												Pop. Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1000	1001 to 3000	3001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	1,000,000 to 3,000,000	
On a source	325	(20)	4	17	53	164	(522)	1,633	5,214	16,325	52,137	163,246	521,360	1,632,455	522
0 to $\frac{1}{4}$ mile	0	*	1	4	13	41	131	408	1,304	4,081	13,034	40,812	130,340	408,114	0
$>\frac{1}{4}$ to $\frac{1}{2}$ mile	39	2	0.2	0.9	(3)	9	28	88	282	882	2,815	8,815	28,153	88,153	3
$>\frac{1}{2}$ to 1 mile	187	1	0.06	0.3	0.9	(3)	8	26	83	261	834	2,612	8,342	26,119	3
> 1 to 2 miles	385	0	0.02	0.09	0.3	0.8	(3)	8	27	83	266	833	2,659	8,326	3
> 2 to 3 miles	679	0	0.009	0.04	0.1	0.4	(1)	4	12	38	120	375	1,199	3,755	1
>3 to 4 miles	2,215	0	0.005	0.02	0.07	0.2	0.7	(2)	7	28	73	229	730	2,285	2
	Nearest Individual =	20												**Total =**	534

References 1, 21, 22

* Score a 20 if the Nearest Individual is within $\frac{1}{8}$ mile of a site; score a 7 if the Nearest Individual is between $\frac{1}{8}$ and $\frac{1}{4}$ mile of a site.

SI TABLE 23 (HRS TABLE 6-18): AIR PATHWAY VALUES FOR WETLAND AREA

Wetland Area	Assigned Value
< 1 acre	0
1 to 50 acres	25
> 50 to 100 acres	75
> 100 to 150 acres	125
> 150 to 200 acres	175
> 200 to 300 acres	250
> 300 to 400 acres	350
> 400 to 500 acres	450
> 500 acres	500

SI TABLE 24: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS

Distance	Distance Weight	Sensitive Environment Type and Value (from SI Tables 14 and 20)	Product
On a Source	0.10	x	
		x	
0-1/4 miles	0.025	x	
		x	
		x	
1/4-1/2 miles	0.0054	x	
		x	
		x	
1/2-1 miles	0.0016	x	
		x	
		x	
1-2 miles	0.0005	x	
		x	
		x	
2-3 miles	0.00023	x	
		x	
		x	
3 to 4 miles	0.00014	x	
		x	
		x	
> 4 miles	0	x	
		Total Environments Score =	

AIR PATHWAY (concluded)

WASTE CHARACTERISTICS

9.	If any Actual Contamination Targets exist for the air pathway, assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if there are no Actual Contamination Targets for the air pathway, assign the calculated HWQ score for sources available to air migration.	10,000
10.	Assign the highest air toxicity/mobility value from SI Table 21.	20
11.	Multiply the air pathway toxicity/mobility and waste quantity scores. Assign the Waste Characteristics score from the table below: Product = 200,000	WC = 18

Product	WC Score
0	0
>0 to <10	1
10 to <100	2
100 to <1,000	3
1,000 to < 10,000	6
10,000 to <1E + 05	10
1E + 05 to <1E + 06	18
1E + 06 to <1E + 07	32
1E + 07 to <1E + 08	56
1E + 08 or greater	100

AIR PATHWAY SCORE:

$$\frac{LE \times T \times WC}{82,500}$$

500 78.4 + 18

8.55 (maximum of 100)

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SITE SCORE CALCULATION	S	S^2
GROUND WATER PATHWAY SCORE (S_{GW})	32.26	1040.70
SURFACE WATER PATHWAY SCORE (S_{SW})	100.	10,000
SOIL EXPOSURE (S_S)	6.77	45.83
AIR PATHWAY SCORE (S_A)	5.55	73.10
SITE SCORE $\sqrt{\frac{S_{GW}^2+S_{SW}^2+S_S^2+S_A^2}{4}}$ = 52.82		52.82

RECOMMENDATION

Further action is recommended

COMMENTS

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